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TWO NEW FROGS FROM DARIEN

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Through the kindness of Dr. G. K. Noble, and with the assistance of a Grant-in-Aid from the National Research Council, I was enabled to examine the collection of reptiles and amphibians made in Darien in 1924 by C. M. Breder, Jr., while he was a member of the Marsh-Darien Expedition.

Having examined the Breder collection in The American Museum of Natural History, I have now seen practically all the herpetological material from Panama in existence in collections. The Breder collection is very rich in Salientia, but affords few novelties and few additions to the known fauna of Panama. It thus bears out a major conclusion already published, which is, that the herpetological fauna of Panama falls into two geographical groups: that of western Panama, and that of the Canal Zone and Darien. This agrees with the geography of the isthmus.

Two species of frogs in the collection are quite definitely new to North America. I have been unable to place them in any described South American species and consequently describe them here.

Eleutherodactylus brederi, new species

TYPE.—A. M. N. H. No. 40523, collected April 26, 1924, by C. M. Breder, Jr.

TYPE LOCALITY.—Chalichiman's Creek, Darien, Panama, "a small mountain tributary draining into the Chucurti or Sucubti. It is close to the Continental Divide, just back of Caledonia Bay, and drains into the Chucunaque system."

RANGE.—Known only from type locality and from Rio Chico, Darien (which "runs almost due west into the Chucunaque, joining it at Yavisa").

DIAGNOSIS.—An *Eleutherodactylus* of the *gollmeri-noblei* group, closely allied to *noblei* of western Panama and Costa Rica; disks developed only on two outer fingers; webs of feet rudimentary; sides of face dark; belly smooth; dorsal surface smooth save for dorsolateral glandular lines; inverted "V" markings on dorsum; heel reaching snout.

DESCRIPTION.—Head longer than broad; canthus rostralis marked; snout long, distance from eye to nostril greater than diameter of eye; tympanum $\frac{3}{5}$ eye; vomerine teeth in two short, oblique rows, running in and back from a point near inner hind border of choanae; two outer fingers with enlarged disks; toes with slight web at

[1]Contributions from the Department of Biology, Haverford College, No. 22.

base; heel reaching snout; a dorsolateral glandular fold; finely shagreened above; belly smooth with a discoidal area; snout to vent 43 mm.; gray above, white below; a black line from snout through eye, which continues along glandular fold, and sends a branch down behind tympanum; a dark line between eyes; faint bars on sides; three inverted "V" marks on dorsum; faint barring on legs.

REMARKS.—Two other specimens, No. 41052, from type locality, and No. 41176, from Rio Chico, show no marked divergence.

This frog differs from the widely distributed *E. gollmeri* in the enlarged disks on the two outer fingers, in the dorsolateral fold, and in color. It agrees with *E. noblei* from Costa Rica and western Panama in the presence of the finger disks, but differs in dorsal markings, and in the presence of the dorsolateral fold. It may be considered as most closely related to *noblei*, and to be its representative in Darien.

Hyla subocularis, new species

TYPE.—A. M. N. H. No. 41117, collected March 3, 1924, by C. M. Breder, Jr.

TYPE LOCALITY.—Rio Chucunaque, first creek above entrance of Rio Tuquasa.

RANGE.—Known only from type locality.

DIAGNOSIS.—A small *Hyla* with skin of head free; vomerine teeth in two small groups between the choanae and in line with their hind edges; snout short and blunt; tympanum indistinct, ⅓ eye; very distinct markings on head; fingers about one-third webbed; toes webbed almost to the disks of third and fifth.

DESCRIPTION.—Snout shorter than diameter of eye, blunt; canthus rostralis very marked; tympanum indistinct, ⅓ eye; vomerine teeth in two short linear groups between the choanae and in line with their hind borders; fingers webbed at base, about one-third; toes webbed nearly to disks of third and fifth; heel reaching to the anterior border of eye; smooth above; belly rugose; throat and chest smooth; a marked fold across chest; length 23 mm.; brown, a darker dorsal marking resembling an hourglass beginning between eyes; white below; head dark with a light line extending around snout on to shoulder, connecting on snout with the light edge of the upper lip; a dark dot in the light edge of snout; two light bars from eye to edge of lip, enclosing a bar of dark between them; a single narrow dark bar on shin; thigh with a light semicircular mark on a brown ground.

REMARKS.—Structurally this *Hyla* is similar to a number of other Central American forms, of which *underwoodi* is the most widespread. Several different forms resembling it are found in the high mountains of western Panama and Costa Rica. The head coloration is sufficient to distinguish it immediately from any of these.